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Author(s): Stephen E. Wiberley, Jr.

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Stephen E. Wiberley, Jr.

Editing Maps: A Method for Historical

Cartography¹ The editing of verbal historical sources in America has a long tradition, culminating in what Morgan has called “total editing,” in projects like *The Papers of Thomas Jefferson* and *The Adams Papers*. The editing of old maps, however, is a very new field. When the staff of the *Atlas of Early American History* began to edit the eighteenth-century city plans that served as the basis for the “Cities” section of the book, they had no models of edited maps to follow.²

Considering that edited verbal documents can tell so much about the past, it is surprising that few historians have tried to edit old maps. Before the publication of the *Atlas* five methods were used to depict historical situations cartographically: facsimiles; facsimiles with additions; backdated modern base maps with historical data added; unchanged modern base maps with historical data added; and historical maps compiled from evidence contemporaneous with or slightly more recent than the date of the situation.³

Stephen E. Wiberley, Jr. is Bibliographer for the Social Sciences at the University of Illinois at Chicago Circle and was editor of the city plans for *Atlas of Early American History: The Revolutionary Era, 1760–1790* (Princeton, 1976).

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1 The term historical cartography is used here as Skelton defined it, as the procedures by which maps are made to depict the geographical circumstances of the past. This is different from the history of cartography which traces the development of the graphic forms in which man has expressed his knowledge and ideas about the earth. See R. A. Skelton, *Maps: A Historical Survey of Their Study and Collecting* (Chicago, 1972), 62.

2 Edmund S. Morgan, “John Adams and the Puritan Tradition,” *New England Quarterly*, XXXIV (1961), 518; Lester J. Cappon, “A Rationale for Historical Editing Past and Present,” *William and Mary Quarterly*, XXIII (1966), 59–72. Julian Boyd, *The Papers of Thomas Jefferson* (Princeton, 1950); Lyman Butterfield, *The Adams Papers: Diary and Autobiography of John Adams* (Cambridge, Mass., 1962). The city plans and accompanying text are found in Cappon (ed.), *Atlas of Early American History: The Revolutionary Era, 1760–1790* (Princeton, 1976), 8–13, 81–86.

3 Historical map here means one made long after the date of situation. This differs from an old map, made at or near the date of situation. Emerson D. Fite and Archibald Freeman (comps. and eds.), *A Book of Old Maps Delineating American History from the Earliest Days down to the Close of the Revolutionary War* (New York, 1969; reprint ed.) and Charles O. Paullin (ed. John K. Wright), *Atlas of the Historical Geography of the United States* (Washington, D.C., 1932), plates 8–32D, 156–159B and related text 7–15, 139 use facsimiles.

The first four methods, especially the first two and the fourth, can be accomplished quickly and simply, and as a result cost relatively little. The fifth method is far more complicated and expensive, and is used less frequently. Instead of being based on a single map, historical maps based on contemporaneous evidence derive from several maps. The compilers use these to establish “a reliable framework of existing ground features of the earlier periods to form graphical control networks.” To this framework compilers add data drawn from verbal, pictorial, and archaeological sources.⁴

Editing an old map offers a middle ground between the simpler methods of using facsimiles and modern bases, and the complex method of creating a historical map from contemporaneous sources. Unlike using facsimiles or modern bases, editing maps requires tracing linework and transforming symbols of the source map. Unlike a map based on contemporaneous sources, an edited map derives from one source map, not several. Since the *Atlas* has demonstrated the feasibility of editing old maps, the rationale, advantages, and problems of this method as well as its relationship to other historical editing merit examination.

The task of editing old maps can be better understood by comparing it with editing the papers of an individual. One edits personal papers and maps because both are unique sources of valuable information and a general audience cannot easily read and understand facsimiles of the originals. In several important ways the editing of city plans for the *Atlas* parallels the editing of the personal papers of historical figures by editors like Boyd for

Samuel Whittemore Boggs (comp.), “The Northeast and Northwest Boundary Gaps on Mitchell’s Map in Relation to Modern Geography, with a Modern Inset of the Northeast Boundary Controversy,” in Samuel Flagg Bemis, *A Diplomatic History of the United States* (New York, 1965; 5th ed.), 102–103 is a facsimile with additions. Most of the maps in *Atlas of Early American History* are backdated modern base maps with historical data added. For use of an unchanged modern base map see “United States Military Posts, 1789–1895,” in Francis Paul Prucha, *A Guide to the Military Posts of the United States, 1789–1895* (Madison, 1964), 37–51.

4 The outstanding example of historical maps derived from contemporaneous sources is M. D. Lobel and W. H. Johns (eds.), *Historic Towns: Maps and Plans of Towns and Cities in the British Isles, with Historical Commentaries from Earliest Times to 1800* (London, 1969). The authors describe their method in their “Introduction.” See also Marcel Trudel, “Quebec vers la Fin du Règime Français,” in his *Atlas de la Nouvelle-France, An Atlas of New France* (Quebec, 1968), 200–201.

Jefferson and Butterfield for *Adams*. Just as the introduction to a volume of personal papers tells about the persons who wrote them, the text describing each city plan gives biographical and bibliographical data about the makers of the original. Personal papers are printed in modern typography; city plans are redrawn in modern cartographic style. The editor dates each document in a volume of personal papers; likewise he supplies the date of situation for each city plan. Editors like Boyd and Butterfield modify personal papers in some places by correcting spelling, conventionalizing capitalization and punctuation, and expanding contractions. The editors of the city plans also correct errors but on a more fundamental level than is done by the editors of personal papers. Finally, just as footnotes and editorial apparatus indicate significant annotations or corrections made in a written document, so too the text to a city plan describes how the edited version differs from the original.⁵

Tanselle has recently criticized editorial procedures similar to those of Boyd and Butterfield. Particularly relevant to this discussion is that Tanselle condemns their correction of obvious minor errors and their modernization of certain aspects of old documents, especially when such changes are made silently. He contends that even small alterations distort a document's meaning and hide crucial data from the reader. He maintains that the historical editor must present documents exactly as their authors did. Tanselle's arguments are rigorous, but they do not necessarily apply to editing old maps. One could choose a "copy-text" of an old map and, based on it, produce a map that conveys, in modern form accompanied by notes on variants, the essence of what the makers of the original intended. For maps this would mean including geographically inaccurate as well as accurate information in the edited version. This is a legitimate activity, but no one has yet done it. On the other hand, one could take an old map, accept some of its data without reservation, verify and correct other of

5 On the uniqueness of information in old maps see John H. Long, "Studying George Rogers Clark's Illinois Campaign with Maps," in *The French, the Indians, and George Rogers Clark in the Illinois Country* (Indianapolis, 1977), 67–91; William P. Cumming, "Mapping of the Southeast: The First Two Centuries," *Southeastern Geographer*, VI (1966), 3. The method of editing the city plans is described in *Atlas of Early American History*, 81. Boyd discusses his method in *The Papers of Thomas Jefferson*, I, xxix–xxviii; Butterfield his in *The Adams Papers*, I, lii–lxii.

its data, and then include both types of data in the edited map. This is the method of editing discussed in this note. It is very different from what Tanselle calls for and even from the work of editors like Boyd and Butterfield.⁶

Although it is not logical to change the contents of personal papers when editing them, it is logical to correct the contents of old maps because they differ fundamentally from personal papers. Personal papers reveal what was in an individual's mind at a given time. Although one can decide, by comparison with earlier and later writings, whether a given document shows consistency in thought, one cannot question its fundamental accuracy in telling what the writer had in mind at the moment he wrote it. Because of the basic validity of personal papers, an editor should not change their essentials.

Whereas personal papers reflect what was in the mind of one person, an old map represents the appearance of a portion of the earth in the past. In other words, a map purports to tell us something about a reality outside the mind of its creators. Although it may be useful to edit a map in order to convey both the accurate and inaccurate information it contains and thereby show the knowledge people in the past had about the appearance of the earth, it is also legitimate to edit an old map by correcting its errors. Such editing offers a depiction of historical geographical reality that cannot be attained as easily by any other means.

Because the purpose of the *Atlas* was to produce a reference book of American historical geography and not simply to recreate in modern form maps of the eighteenth century, the editing of eighteenth-century maps corrected their content. It took place only when it resulted in the most accurate depiction of a given area that was possible. Given the inadequacies of most eighteenth-century maps, there were few cases when this was possible. Indeed, it is fair to argue that most small-scale maps of America—at a scale smaller than one inch to a mile, usually embracing large areas—made before 1865 cannot be edited.

For purposes of this discussion it can be said that maps contain two elements. First, they show the relative positions of the components of the landscape—drainage, terrain, shorelines,

6 G. Thomas Tanselle, "The Editing of Historical Documents," *Studies in Bibliography*, XXXI (1978), 1-57.

and man-made phenomena. The last include cities, that usually appear as dots on small-scale maps, and buildings, that are often outlined on large-scale maps. Second, maps identify toponymic features, i.e., the names given to components of the landscape. A map that shows only the landscape may be called a base map. It is, in effect, a picture of an area of the earth on which nothing is labeled. If a map depicts correctly the relative positions of the components of the landscape it is said to be planimetrically accurate.

Essentially the problem with old maps at a small scale is that they are planimetrically inaccurate. Thomas Jefferson once described John Henry's *A New and Accurate Map of Virginia . . . Engraved by Thomas Jefferys* (London, 1770) as "a mere cento of blunders." The Henry map contains valuable information, but it and other small-scale eighteenth-century maps are so basically inaccurate that they cannot be edited. Given the deficiencies of these maps, the best way to depict a large area of early America is to plot information on a backdated modern base map.⁷

Using a modern map to show an area as it was more than 100 years ago may not seem sensible. Indeed, there are problems: in some areas the coastline has changed and Americans have added hundreds of reservoirs and canals. But it is far easier to allow for these changes, and to backdate a modern base map, than to tinker with a contemporaneous map. Scale is the decisive consideration. The smaller the scale, the less the need to account for changes in the landscape. For example, at 1:2,000,000 it is impossible to depict the erosion of 100 feet of coastline since the required correction, .0006 inch, is much less than the thickness of the finest visible line. Furthermore, a small-scale map of a large area holds only the most general information about settlements. Instead of depicting the extent of built-up areas, these maps show locations by dots only. They outline only the larger streams and rivers the courses of which in most cases have remained much the same over the centuries.

Although there is great advantage to compiling a historical map of a large area at a small scale on a modern base, this benefit diminishes as the area to be mapped decreases and the scale in-

7 Boyd, *Papers of Jefferson*, IV, 41. On the inaccuracy of late eighteenth-century maps of America see also Douglas W. Marshall and Howard H. Peckham, *Campaigns of the American Revolution: An Atlas of Manuscript Maps* (Ann Arbor, 1976), 99, 130.

creases. As the scale increases, it becomes more difficult to back-date a map. At 1:10,000 changes of 100 feet must be accounted for since they amount to .12 inch, a noticeable distance. Anyone familiar with the histories of American cities knows that their landscapes have undergone numerous changes of this magnitude and greater. To determine these changes would involve an examination of countless written documents and archaeological evidence as well as that of old maps.

Facing the impossibility of using backdated modern maps as bases for drawing plans of late eighteenth-century American cities, the staff of the *Atlas* decided to employ contemporaneous city plans. Although eighteenth-century maps of large areas are usually inaccurate, city plans of that time are quite accurate. The difference in quality reflects the capabilities of eighteenth-century surveyors and cartographers. Because of limitations in transportation and in instrumentation, these mapmakers could not obtain accurate information about much of the landscape that their small-scale maps purported to depict. Furthermore, all surveyors were limited by the accuracy of their instruments and techniques. Even the most skilled of them made serious errors in determining longitude and latitude.⁸

In contrast, colonial cities were small places and a single surveyor could easily view an entire town with his own eyes. There are few surviving records that describe how engineers surveyed cities, but the journal of Captain John Montresor offers evidence of the care with which one surveyor worked. Furthermore, a comparison of William Faden's *A Plan of the Town of Boston* (London 1777)—better known as the Page Plan—with information in other sources suggests the diligence with which cartographers transformed surveys into finished maps. Such efforts resulted in city plans with a high degree of planimetric accuracy.⁹

A map of good planimetric accuracy is a prerequisite for editing. This leads to the question of which maps of America are worth editing. The following table offers a rough summary of the planimetric accuracy of large-scale and small-scale old maps.

8 Long, "Studying Clark's Illinois Campaign," 81; "The United States in North America (Mitchell Map)," in *Atlas of Early American History*, 58.

9 G. D. Scull (ed.), *The Montresor Journals*, Collections of the New York Historical Society for the Year 1881 (New York, 1882), esp. 341–352.

Table 1 Planimetric Accuracy of Old Maps of America

PERIOD	LARGE-SCALE	SMALL-SCALE
Before 1700	Fair	Very poor
1700–1790	Good	Poor
1790–1865	Very good	Fair to good
1865–present	Very good	Very good

Before 1700 even most large-scale maps lacked accuracy because instrumentation was poor, the country was largely wilderness and difficult to survey, and skilled surveyors and cartographers were few. In the eighteenth century the quality of large-scale maps of parts of America improved greatly, in part because of the efforts of British engineers and mapmakers. With the establishment of the United States small-scale maps became better as public-spirited individuals and the states themselves sponsored maps of their territories. During the nineteenth century the quality of small-scale maps gradually improved. The state atlases issued after the Civil War best illustrate the level of quality American cartographers attained toward the end of the century.¹⁰

Historical editing of maps for reference purposes first entails finding maps of good planimetric quality. The second step is to correct mistakes in toponymy by deleting or changing inaccurate information, and, since omission of information can in some cases be seen as error, adding data. Thus, the editors of the *Atlas* corrected misspellings of street names and repositioned the labels of buildings that were located incorrectly.

As far as adding information to an edited city plan was concerned, the editors initially set the following rule: if a source map showed one instance of a given type of phenomenon, then the edited version would identify all occurrences of that phenom-

10 Erwin Raisz, "Outline of the History of American Cartography," *Isis*, XXVI (1936), 379; Walter W. Ristow, "State Maps of the Southeast to 1833," *Southeastern Geographer*, VI (1966), 33. For a discussion of the compilation of a post-Civil War state atlas see Henry F. Walling, *Atlas of the State of Michigan* (Detroit, 1873), 5–6. Between 1865 and 1877, seventeen state atlases were published. See Clara Egli LeGear (comp.), *United States Atlases* (Washington, D.C., 1950), I, 44, 51, 63, 85, 97, 132, 153, 180, 202, 203, 243, 265, 281, 294, 306, 307.

Map 1 Detail from a 1777 map of Boston

SOURCE: William Fadden, *Plan of the Town of Boston* (London, 1777). This is the plan of Thomas Page.

Map 2 Detail from edited map of Boston

SOURCE: Lester J. Cappon (ed.), *Atlas of Early American History* (Princeton, 1976). Reprinted by permission of Princeton University Press.

enon. The rationale for this policy was that maps have an air of finality. If readers saw some, but not all of a given class of data, they would infer that those not shown did not exist. For example, the Page Plan of Boston gives locations of only nine of the eighteen churches in the city in 1775. For completeness of coverage the edited plan identifies the other nine churches. In effect the editors tried to let the source plan determine the types of information added: on a map showing churches, others would be located if lacking; but the edited version of a source plan that did not label churches would not show them, even if they existed at the time.

Ultimately this rule had to be modified in two respects. First, each plan was part of a series of fifteen and would be viewed in relation to the others. If readers saw burying grounds on one plan, but not on another, they might assume that the second city did not have any, a condition not always true. For sake of consistency the editors strove to identify on all plans the types of phenomena labeled on one. Second, although some source plans showed locations of individually held private property, it was impossible to gather the information needed to label all such property. Consequently, information about private property was deleted.

The attempts of the editors of the city plans to depict all instances of a given phenomenon probably could be applied to other editing projects. But the editors of the *Atlas* modified plans in other ways that seem appropriate only for their project. For example, some of the original plans, made by military engineers in wartime, depict temporary gun placements and other transient military features. Since the aim of the series was to create a set of reference plans for cities under normal conditions, such transient military features were deleted from the edited versions. This example suggests that future editors will have to adopt *ad hoc* policies to meet special needs.

The editorial policy for the city plans was conservative. It limited supplementation to phenomena that appeared on at least one source. Future editors may adopt more liberal policies by deleting information on a source map to make room for types of data not on it. For example, an expert on coal mining might take old county maps and add locations of coal mines while deleting other information. Such modifications would result in a thematic

map. Thus edited maps do not have to be limited to a reference function.

What are the advantages of editing old maps over the other five methods of mapping historical situations? First, edited maps are superior to facsimiles. On an edited map the verbal data are verified, corrected, and supplemented when needed. This contrasts with facsimiles, which retain all the errors on the originals. Second, even when historical information is added to facsimiles, the original map's mistakes still stand. Furthermore, to make many old maps readily available to the public it is often necessary to reduce them. But reduced facsimiles can be difficult to read because their linework or lettering often run together. Lastly, because cartographic techniques have improved over the years, maps printed today present the same information with more clarity, legibility, and intelligibility than older maps.¹¹

Editing old maps is sometimes, but not always, superior to plotting historical data on a backdated modern base map or on an unaltered modern base. Editing a large-scale old map is usually easier and the results more accurate than backdating and plotting. Most large-scale maps made after 1700 can be edited, but few small-scale maps made before 1865 are accurate enough to be edited. Thus, when depicting a large area at a small scale, it is better to backdate a modern map and plot. If the scale of a historical map is small enough, there may be little need to backdate the modern base since changes in the landscape that have taken place over time may scarcely be discernible at a very small scale. Also, economic constraints might dictate the choice to plot on a modern base without going to the expense of backdating it.

One chooses to edit maps when doing so promises greater accuracy than the use of facsimiles or modern base maps, although editing is more expensive than these methods. At a still higher price one can obtain a map derived entirely from contemporaneous sources. Such a map contains as much correct toponymic information as the edited map. And, if its sources are adequate, its depiction of the landscape should be more accurate than that

11 Concern over loss of legibility resulting from reduction led Marshall and Peckham to reproduce in facsimile only sections of some old maps in their *Campaigns of the American Revolution*, v, 25, 71, 111, 125, 131, 134–136.

of any single original map of the desired date of situation. Thus, the maps in *Historic Towns* depict the landscape more accurately than the city plans in the *Atlas*. But the plans of English towns were far more difficult to create. In short, when mapping historical situations at a large scale, the edited map offers great accuracy at relatively low cost.